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REMARKS

This is a full and timely response to the final Official Action mailed February 8, 2006. Reconsideration of the application in light of the following remarks is respectfully requested.

Status of Claims:

No amendments to the application are made by the present paper. Claims 59 and 60 have been withdrawn from consideration pursuant to a previous Restriction Requirement. Thus, claims 1-58 and 61-67 are currently pending for further action.

Allowable Subject Matter:

The recent Office Action indicated that claims 11, 25 and 26 contain allowable subject matter. Applicant wishes to thank the Examiner for this indication of allowable subject matter.

Prior Art:

Claims 19-24, 48, 49, 55, 56 and 66 were rejected as anticipated under 35 U.S.C. § 102(e) by U.S. Patent Application Publication No. 2003/0112507 to Divelbiss et al. ("Divelbiss"). For at least the following reasons, this rejection is respectfully traversed.

Original independent claim 19 recites:

A method of displaying an image in three dimensions during a frame period, said method comprising:
generating a left image sub-frame and a right image sub-frame, said left image sub-frame defining a visual perspective of a left eye and said right image sub-frame defining a visual perspective of a right eye for said image;
displaying said left image sub-frame with an electronic display system, wherein said electronic display system outputs a display of said left image sub-frame utilizing a first plurality of colors; and

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displaying said right image sub-frame with said display system, wherein said display system outputs a display of said right image sub-frame utilizing a second plurality of colors;

wherein said first plurality of colors is distinct from said second plurality of colors.

(emphasis added).

In contrast, Divelbiss does not teach or suggest a method in which left and right image sub-frames are *displayed* on an electronic display system utilizing distinct pluralities of colors. Applicant wishes to note that claim 19 recites *displaying* the left and right sub-frames with different sets of colors *on an electronic display system*. This is prior to, and without reference to, colored filter glasses that change the way a viewer perceives the displayed image. The claim recites that the sub-frames are themselves displayed on the electronic display system using distinct pluralities of colors. This means that a separate set of colors is used on the electronic display to generate/display each of the two sub-frames respectively, irrespective of what colors are perceived by a viewer wearing filter glasses.

In this regard, the Office Action cites Divelbiss at paragraph 222. This portion of Divelbiss is irrelevant to the claimed method. At paragraph 222, Divelbiss does not discuss the colors with which an image is displayed on an electronic display system. Rather, this portion of Divelbiss teaches “active color filter glasses” where one filter or lens transmits magenta and the other transmits green. (Divelbiss, paragraph 0222, last sentence).

In the system taught by Divelbiss, the image is always displayed on the display device with the same set of primary colors, *only a single plurality of colors*, (RGB see Fig. 43). The viewer wears filter glasses that pass two different colors, magenta and green, respectively to the viewer’s two eyes. Divelbiss never teaches or suggests that left and right image sub-frames are displayed on an electronic display system using different pluralities of colors as claimed. Divelbiss does not teach or suggest “displaying said left image sub-frame with an

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electronic display system, wherein said electronic display system outputs a display of said left image sub-frame utilizing a first plurality of colors; and displaying said right image sub-frame with said display system, wherein said display system outputs a display of said right image sub-frame utilizing a second plurality of colors, wherein said first plurality of colors is distinct from said second plurality of colors."

Moreover, the color scheme used by Divilbiss includes one filter/lens that passes green and one filter lens that passes magenta. (Divilbiss, paragraph 0222, last sentence). However, green is not a "plurality" of colors. Green is a single color. Consequently, even if Divilbiss, as cited in the final Office Action, were discussing the display of sub-frames rather than filter glasses, Divilbiss does not teach or suggest a scheme in which left and right sub-frames are each displayed using a distinct *plurality* of colors.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least these reasons, the rejection of claim 19 and its dependent claims based on Divilbiss should be reconsidered and withdrawn.

Similarly, independent claim 48 recites:

A 3D imaging device, comprising:

- an image processing unit configured to generate image sub-frame data; and
- a color modulator electronically coupled to said image processing unit and configured to generate a plurality of image sub-frames based on said image sub-frame data;

- wherein said color modulator uses a first plurality of colors to output at least one image sub-frame of said plurality of image sub-frames and a second plurality of

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colors, distinct from said first plurality of colors, to output at least one other image sub-frame of said plurality of image sub-frames.
(emphasis added).

As demonstrated above, Divelbiss fails to teach or suggest a color modulator that is electronically coupled to an image processing unit and that "uses a first plurality of colors to output at least one image sub-frame of said plurality of image sub-frames and a second plurality of colors, distinct from said first plurality of colors, to output at least one other image sub-frame of said plurality of image sub-frames." Divelbiss does not teach or suggest a color modulator electronically coupled to an image processing unit that uses distinct pluralities of colors to generate different sub-frames.

As before, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claim 48 and its dependent claims based on Divelbiss should be reconsidered and withdrawn.

Additionally, independent claim 66 recites:

A system for displaying an image in three dimensions during a frame period, said system comprising:
means for generating a left image sub-frame and a right image sub-frame, said left image sub-frame defining a visual perspective of a left eye and said right image sub-frame defining a visual perspective of a right eye for said image;
means for electronically displaying said left image sub-frame utilizing a first plurality of colors to compose the display of the left image sub-frame; and
means for electronically displaying said right image sub-frame utilizing a second plurality of colors to compose the display of the right image sub-frame;
wherein said first plurality of colors is distinct from said second plurality of colors.
(emphasis added).

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As demonstrated above, Divelbiss fails to teach or suggest a system including means for displaying left and right image sub-frames utilizing distinct first and second pluralities of colors. As before, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claim 66 based on Divelbiss should be reconsidered and withdrawn.

Additionally, dependent claim 20 recites "wherein said first plurality of colors and said second plurality of colors comprise different sets of primary colors." Claim 49 recites similar subject matter.

As demonstrated, Divelbiss does not teach or suggest first and second pluralities of colors. Moreover, Divelbiss certainly does not teach or suggest "different sets of primary colors" as claimed. Divelbiss only teaches a single set of primary colors, red, green and blue. (Divelbiss, paragraph 0048-0059). For at least this additional reason, claims 20 and 49 should be held clearly patentable over Divelbiss.

Dependent claims 50 and 54 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Divelbiss and U.S. Patent No. 5,870,137 to Stuetzler ("Stuetzler"). Claims 51 and 52 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Divelbiss and Bolas (of record). Claims 57 and 58 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Divelbiss and U.S. Patent No. 5,671,007 to Songer ("Songer"). These rejections are

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respectfully traversed for at least the same reasons given above with respect to independent claim 48.

Claims 1, 5-7, 27-29, 33-35, 45, 46, 64 and 65 were rejected as unpatentable under 35 U.S.C. § 103(a) over the combined teachings of U.S. Patent No. 5,671,007 to Songer ("Songer") and U.S. Patent Application Publication No. 2005/0254702 to Era ("Era"). This rejection is respectfully traversed for at least the following reasons.

The Era reference is not valid prior art as against the present application. The present application was filed April 1, 2004. The Era reference was published subsequently, almost eight months later, on November 17, 2005. Consequently, the Era reference could only possibly qualify as prior art against the present application under 35 U.S.C. § 102(e). Considering this possibility, the Applicant notes that the Era reference is based on a PCT application, PCT/JP2003/10499, filed August 30, 2003.

However, the Era reference cannot be given the filing date of this antecedent PCT application as its effect prior art date under § 102(e). 35 U.S.C. § 102(e) reads, in pertinent part, "an international application filed under the treaty defined in section 351(a) [the Patent Cooperation Treaty] shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States *and was published under Article 21(2) of such treaty in the English language.*" (emphasis added).

In the current case, the Era PCT application was published in Japanese as WO2004019621, and *not in English*. Consequently, under the terms of § 102(e) cited above, the Era reference can only apply as effective prior art as of its U.S. publication date,

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November 17, 2005. Consequently, the Era reference cannot be applied as prior art against the present application. For at least this reason, the rejection of claims 1, 5-7, 27-29, 33-35, 45, 46, 64 and 65 based, in part, on the Era reference, must be reconsidered and withdrawn.

Additionally, even if the Era reference were valid prior art against the present application, the combination of Songer and Era does not teach or suggest the claimed subject matter as alleged by the Office Action.

Claim 1 recites:

A method of displaying an image frame by projection in three dimensions (3D) or in two dimensions (2D) with a projection system, said method comprising:
selecting between a 2D mode of operation and a separate 3D mode of operation for said projection system;
generating and projecting a left image sub-frame and a right image sub-frame during a frame period if said 3D mode of operation for said projection system is selected; and
generating and projecting only a 2D image frame during said frame period if said 2D mode of operation for said projection system is selected;
wherein said left image sub-frame defines a visual perspective of a left eye and said right image sub-frame defines a visual perspective of a right eye.
(emphasis added).

In contrast, Songer does not teach or suggest a method involving a projection system. Moreover, Songer does not teach or suggest a method of displaying an image that involves a projection or other display system selectively operating in one of two separate modes. These facts are expressly acknowledged in the recent Office Action. (Action of 2/8/06, p. 7).

Consequently, the Action cites to Era on these points. However, Era also fails to teach or suggest the claimed subject matter of “selecting between a 2D mode of operation and a separate 3D mode of operation *for said projection system.*” (emphasis added). Rather, Era teaches a display screen (MD) designed for use, for example, in a mobile phone (Era, Fig. 44). This screen (MD) can display images in either a 2D or 3D mode. (Era, Fig. 2, paragraph

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0083). Thus, Era does not teach or suggest the claimed method including selecting between a 2D mode of operation and a separate 3D mode of operation *"for[a] projection system."*

In this regard, the Office Action refers to Era at paragraph 0225. (Action of 2/8/07, p. 7). However, this portion of Era merely mentions that stereoscopic data has been stored in separate files in prior art projection systems. Era does not actually teach anything relative to a projection system other than this comment on the prior art. According to Era, "it is possible to employ a so called Odd-even file separation scheme, as shown in FIG. 41, in which image data for the left eye and image data for the right eye are stored in files separately. This scheme is typically employed in a projector for displaying a stereographic image." (Era, paragraph 0225).

Thus, the cited portion of Era does not actually teach or suggest "selecting between a 2D mode of operation and a separate 3D mode of operation *for [a] projection system,*" and the Action has already expressly conceded that Songer does not teach or suggest such subject matter. Consequently, the combination of Songer and Era would not teach or suggest to one of skill in the art the method of claim 1 including "selecting between a 2D mode of operation and a separate 3D mode of operation *for said projection system.*" (emphasis added).

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). For at least this additional reason, the rejection of claim 1 and its dependent claims based on a combination of Songer and Era should be reconsidered and withdrawn.

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Claim 2 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and U.S. Patent No. 5,870,137 to Stuetzler ("Stuetzler"). Claims 3 and 4 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era, Stuetzler and U.S. Patent Application Publication No. 2003/0234790 to Hochmuth et al. ("Hochmuth"). Claims 8, 9, 10 and 18 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and U.S. Patent Application Publication No. 2003/0112507 to Divelbiss et al. ("Divelbiss"). Claim 12 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and U.S. Patent Application Publication No. 2005/0037843 to Wells et al. ("Wells"). Claim 13 was rejected being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Anderson (of record). Claim 14 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Sato (of record). Claim 15 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Divelbiss. Claims 16 and 17 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Bolas (of record). Claim 67 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Taniguchi (of record).

These rejections are respectfully traversed because Era is not valid prior art as against the present application and for at least the additional reasons given above with respect to claim 1.

Independent claim 27 recites:

A display system with a selectable mode of operation for displaying an image frame in three dimensions (3D) or in two dimensions (2D), said system comprising:

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a spatial light modulator; and
an image processing unit configured to control said spatial light modulator in a selected mode of operation which is either a 3D mode of operation or a 2D mode of operation;

wherein if said selected mode of operation is said 3D mode of operation, said image processing unit outputs to said spatial light modulator a left image sub-frame carrying a left eye perspective and a right image sub-frame carrying a right eye perspective during a frame period and, if said selected mode of operation is said 2D mode of operation, said image processing unit outputs to said spatial light modulator a 2D image frame to be displayed on a viewing surface during said frame period.
(emphasis added).

Again, as demonstrated above, Era is not valid prior art as against the present application. For at least this reason, the rejection of claim 27 and its dependent claims should be reconsidered and withdrawn.

Additionally, the combination of Songer and Era does not teach or suggest a spatial light modulator or method of operating a spatial light modulator selectively in a 2D or 3D mode as claimed. As noted above, the combination of Songer and Era is directed only to a display screen such as on a mobile phone, neither reference appears to ever mention a spatial light modulator. Moreover, the recent Office Action does not indicate how or where the cited prior art teaches a spatial light modulator in a system as claimed.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). For at least this additional reason, the rejection of claim 27 and its dependent claims based on a combination of Songer and Era should be reconsidered and withdrawn.

Claim 30 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Stuetzler. Claims 31 and 32 were rejected as being

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unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era, Stuetzler and Hochmuth. Claim 36 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Dibelbiss. Claim 47 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Anderson.

These rejections are respectfully traversed because Era is not valid prior art as against the present application and for at least the additional reasons given above with respect to claim 27.

Claim 61 was rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Taniguichi (of record). This rejection is respectfully traversed because Era is not valid prior art as against the present application. This rejection is further traversed for at least the following additional reasons.

Independent claim 61 recites:

A system for displaying an image frame by projection in three dimensions (3D) or in two dimensions (2D) with a projection system, said system comprising:
means for selecting between a 2D mode of operation and a separate 3D mode of operation for said projection system;
means for generating and projecting a left image sub-frame and a right image sub-frame if said 3D mode of operation is selected for said projection system; and
means for generating and projecting a 2D image frame if said 2D mode of operation is selected for said projection system;
wherein said left and right image sub-frames are left and right perspectives during a frame period if said 3D mode of operation is selected and said 2D image frame is displayed during said frame period if said 2D mode of operation is selected;
wherein said 2D image frame does not comprise sub-frames having different perspectives.

In contrast, as demonstrated above, the combination of Songer and Era does not teach or suggest the claimed system for displaying an image frame *by projection* and *with a*

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projection system. Taniguichi likewise does not teach or suggest this subject matter and consequently cannot cure the deficiencies of Songer and Era. "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. *Accord*. M.P.E.P. § 706.02(j). For at least this reason, the rejection of claim 61 and its dependent claims should be reconsidered and withdrawn.

Moreover, the teachings of Songer, Era and Taniguichi cannot be combined to approximate the claimed system as proposed in the Office Action. The teachings of Songer and Taniguichi work on entirely different principles and are incompatible. Songer teaches a system in which 3D images are displayed using mechanical viewing glasses with left and right light valves that open and close at a field rate and in synchronization with a displayed 3D image. (Songer, abstract). In contrast, Taniguichi teaches a "parallax optic" that is selectively activated over an LCD. (Taniguichi, paragraph 0009).

The Office Action has not satisfactorily explained how or why these very different systems could be combined to approximate the claimed invention or why one of skill in the art would have been motivated to do so. It must be remembered that the "mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1420 (Fed. Cir. 1990)." M.P.E.P. § 2143.01. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." M.P.E.P. § 2143.01. See also, *Gillette Co. v. S.C. Johnson & Son, Inc.*, 919 F.2d 720 (Fed.

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Cir. 1990) ("An analysis of obviousness of a claimed combination must include consideration of the results achieved by that combination.").

For any and all of these reasons, the proposed combination of Songer, Era and Taniguichi does not render claim 61 obvious. Consequently, the rejection of claim 61 and its dependent claims should be reconsidered and withdrawn.

Claims 62 and 63 were rejected as being unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Songer, Era and Stuetzler. These rejections are respectfully traversed because Era is not valid prior art as against the present application and for at least the additional reasons given above with respect to claim 61.

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Conclusion:

For the foregoing reasons, the present application is thought to be clearly in condition for allowance. Accordingly, favorable reconsideration of the application in light of these remarks is courteously solicited. If the Examiner has any comments or suggestions which could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

DATE: April 7, 2006

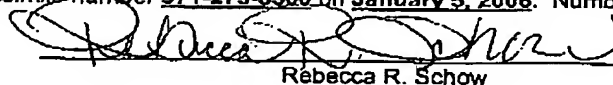


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